PANEL COMMUTATORS
INSTALLING WIPER HOLDERS AND WIPER PADS

1. GENERAL

1.01 This section covers procedures for installing wiper holders and wiper pads for maintenance of panel commutators.

1.02 This section is reissued to add a paragraph covering checking the brush frame and guide studs for wear, and to revise the procedures for installing wiper holder and wiper pads to refer to Section 069-610-801, and to revise the description of the P-15A301 wiper pad.

1.03 Where line finder frames are equipped with 1A compensators, the wiper holder cannot be used because of space limitations.

1.04 Later silicone-impregnated P-15A301 wiper pads have a blue color. Earlier P-15A301 wiper pads have an orange color.

1.05 ***Make-Busy Information:*** Before installing a wiper holder on a commutator brush frame, make busy the circuit associated with the commutator and the circuits associated with the two adjacent commutators in the approved manner. Also make busy the circuits of the three commutators directly behind these. Where necessary, block relays operated or nonoperated to permit raising the brush rod.

1.06 On brush frames that are not equipped with rear guides, check the brush frame and guide studs for wear before mounting a wiper pad holder. At this time, give consideration to mounting a rear guide as covered in Section 026-120-801 if it appears necessary since the wiper pad holder must be removed and remounted to permit the installation of a guide at a later date.

2. TOOLS AND MATERIALS

CODE OR SPEC NO.	DESCRIPTION
TOOLS	
376A	Dental Mirror
555A	3/16-Inch Hex. Single-End Socket Wrench
613A	Clamp
619A	Adjuster
KS-6320	Orange Stick
—	Long-Nose Pliers (or the replaced 6-1/2 inch P-long-nose pliers)
MATERIALS	
P-15A301	Wiper Pad (packed 250 in a can)
P-19A145	Wiper Holder
P-485638	Bracket

3. PROCEDURES FOR INSTALLING WIPER HOLDERS AND WIPER PADS

General

3.01 Before installing a wiper holder, check that the requirements for the associated commutator and commutator brush are met as covered in Section 026-120-701.

3.02 Before initially installing a wiper holder, clean the commutator as covered in Section 069-610-801.

Installing Wiper Holders and Wiper Pads

3.03 Raise the brush rod sufficiently to permit mounting the 613A clamp as shown in Fig. 1. To mount the clamp, proceed as follows. From the right of the brush rod, hook the clamp behind the rod just below the commutator brush frame. Raise the clamp against the frame so that the front projection on the clamp engages the front surface of the frame directly under the brush frame clamping screw. Pull the lower end of the clamp spring forward and position it on the front surface of the brush rod. Make sure that the end of the spring is centered on the rod and holds the clamp firmly in place. The clamp will hold the brush frame in position when the

© American Telephone and Telegraph Company, 1963
Printed in U.S.A.

brush frame clamping screw is loosened as covered in the following procedures.

3.04 Loosen the brush frame clamping screw with the 555A wrench. If a front guide is mounted on the brush frame, remove the guide.

3.05 Where the springs on the commutator brush are strapped at the rear, move the strap away from the commutator with the 619A adjuster before installing the wiper holder.

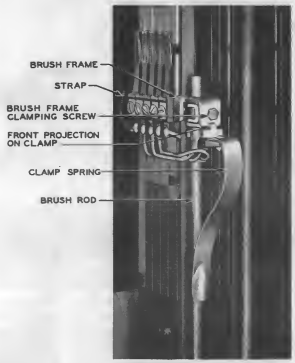

Fig. 1 – 613A Clamp Mounted in Position on Brush Rod

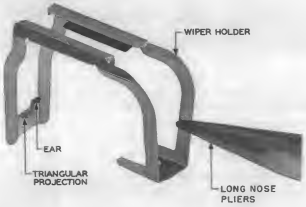

Fig. 2 – Grasping Wiper Holder With Long-Nose Pliers

3.06 Grasp one of the legs at the split end of the wiper holder with the long-nose pliers as shown in Fig. 2. Insert the holder at one side of the commutator around which it is to be placed, so that the split end of the holder is at the rear of this commutator. Then, using the KS-6320 orange stick, spread the legs of the holder just enough to place the holder around the commutator. Draw the holder forward and lower it so that the rear of the holder rests on the brush frame or rear guide when provided, and the front of the holder rests on the top of the brush rod.

3.07 ***Brush Frames Not Equipped With Rear Guides:*** Place the left leg of the wiper holder over the brush rod first, and then the right leg as shown in Fig. 3. With the legs positioned on the rod, place a finger at the top of each side of the holder toward the rear. Press down equally on both sides until the triangular projection (see Fig. 2) on the inside of the holder slips over the rear of the brush frame and snaps in place underneath the frame. In this position, the ears on the inside of the holder should rest on the top surface of the brush frame. Using the 376A dental mirror, check that the rear of the holder is positioned as just described. Then proceed as in 3.09.

3.08 ***Brush Frames Equipped With Rear Guides:*** With the wiper holder resting on the rear guide and rod as described in 3.06, hold the feet of the front legs of the wiper holder against the front edge of the commutator. Place a finger at the top of each side of the holder toward the rear and press down equally on both sides until the triangular projection (see Fig. 2) and the two ears on the inside of the holder slip over the tab of the rear guide. Then proceed as in 3.07. Using the dental mirror, make sure that the triangular projection on the holder engages the undersurface of the commutator brush frame through the slot in the rear guide.

3.09 ***All Brush Frames:*** Where a front guide was mounted on the commutator brush frame, remount the guide over the feet of the holder. If the brush frame was not previously equipped with a front guide, mount a P-485638 bracket over the feet. In either case, press the guide or bracket down firmly against the feet of the wiper holder. Move the legs of the wiper holder away from the brush rod to take up any

play in the mounting holes. With the legs in this position, securely tighten the brush clamping screw. Positioning the legs of the wiper holder in the extreme outward position will prevent their shifting in service. Remove the 613A clamp.

3.10 After installing the wiper holder with the 619A adjuster, move the rear strap back to its original position close to the legs of the wiper holder. Check this position with the 376A dental mirror.

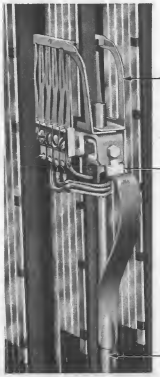

Fig. 3 – Wiper Holder in Place on Commutator Brush Frame

3.11 Insert the P-15A301 wiper pad (see 1.04) in the pad receptacle at each side of the top of the wiper holder (see Fig. 4). To do this,

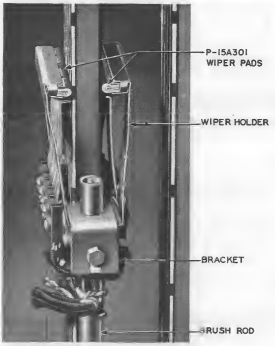

Fig. 4 – Wiper Holder, Bracket, and Pads Mounted in Place

move one side of the holder away from the commutator with the KS-6320 orange stick just enough to permit insertion of the pad. Grasp one end of the pad with the fingers and carefully insert the pad into the receptacle from the front. Take care not to move the holder away from the commutator more than necessary as excessive movement will reduce the tension in the legs.

3.12 Check that the requirements on wiper holders and pads, as covered in Section 026-120-701, are met.

3.13 On circuits that rarely drive the brush rod to the telltale or topmost position, run the brush rod up and down once. This will insure that some silicone fluid reaches the upper surfaces of these commutators. Then, restore the circuit to service.